IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

CHERYL A. ELLISON AS GUARDIAN OF THE ESTATE AND THE PERSON OF CHRISTOPHER D. ELLISON, AN INCAPACITATED PERSON	:	CIVIL ACTION
vs.	:	
UNITED STATES	:	NO. 09cv331

MEMORANDUM

YOHN, J. November _____, 2010

Plaintiff, Cheryl Anne Ellison, individually and as guardian of her husband, Christopher David Ellison, brings this medical malpractice action pursuant to the Federal Tort Claims Act ("FTCA"), 28 U.S.C. § 1346(b)(1), to recover for personal injuries resulting from a massive stroke her husband suffered after receiving dental care at the Philadelphia Veterans' Administration ("VA") Medical Center. The United States, the defendant in the action, has filed motions pursuant to Federal Rule of Evidence 702 and *Daubert v. Merrell Dow Pharmaceuticals*, 509 U.S. 579 (1993), to exclude from trial the proposed testimony of Stuart Super, D.M.D., and Scott Kasner, M.D., plaintiff's experts regarding standard of care and causation, respectively. The United States also moves for summary judgment pursuant to Federal Rule of Civil Procedure 56 on the bases that if either expert is excluded, plaintiff cannot prove an essential element of her case, and that even if both experts are allowed to testify, their testimony is still insufficient. As set forth herein, I conclude that the testimony of neither expert witness should be excluded from trial and that the motions for summary judgment should be denied.

I. Factual and Procedural Background

A. Facts[1]

This case arises out of a stroke suffered by Christopher Ellison (Ellison) on September 11, 2007. (Def.'s Super Statement ¶ 1; Pl.'s Super Resp. ¶ 1.) That morning, Ellison presented to the VA Medical Center to have eight teeth extracted as part of a treatment plan for periodontal disease. (Def.'s Super Statement ¶¶ 2-3; Pl.'s Super Resp. ¶¶ 2-3.) Ellison previously had had three teeth extracted on August 7, 2007. (Def.'s Super Statement ¶ 3; Pl.'s Super Resp. ¶ 3.) Dr. Mark Abel, a resident in oral and maxillofacial surgery at the Hospital of the University of Pennsylvania, performed the extractions assisted by Christine Bender,[2] who was then a dental student at the University of Pennsylvania School of Dental Medicine. (Def.'s Super Statement ¶¶ 4, 9; Pl.'s Super Resp. ¶¶ 4, 9.)

On the day of the extractions, Dr. Abel and Dr. Bender obtained Ellison's written consent

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[1] The following factual recitation is based on the statements of undisputed facts submitted by the United States in support of its motions, plaintiff's responses thereto, and the exhibits provided by both parties. These materials will hereafter be cited as follows: Citations to the government's statements of undisputed facts and plaintiff's responses thereto appear in the form "Def.'s Super Statement ¶ __," "Def.'s Kasner Statement ¶ __," "Pl.'s Super Resp. ¶ __," and "Pl.'s Kasner Resp. ¶ __." Citations to the government's exhibits appear in the form "Def.'s Super Ex. __" and "Def.'s Kasner Ex. __." Plaintiff has submitted two sets of exhibits in connection with each of the government's motions. So as to differentiate between the two, citations to the exhibits in support of plaintiff's responses to the government's statements of undisputed facts appear in the form "Pl.'s Super Resp. Ex. __" and "Pl.'s Kasner Resp. Ex. __," while exhibits to plaintiff's opposition memoranda will be cited as "Pl.'s Super Opp'n Ex. __" and "Pl.'s Kasner Opp'n Ex. __."

[2]Bender has since received her dental degree from the University of Pennsylvania School of Dental Medicine and will hereinafter be referred to as Dr. Bender.

for the procedure, reviewed his medical history, and measured his vital signs.[3] (Pl.'s Super Resp. Ex. B ["Abel Dep."] 108; Pl.'s Super Resp. Ex. C ["Bender Dep."] 40.) Ellison, who was forty-nine years old on the date of the procedure, had a history of hypertension, hyperlipidemia, smoking, diabetes, and obesity. (*See, e.g.*, Pl.'s Kasner Opp'n Ex. E ["Kasner Dep."] 21-24.) Dr. Abel was aware that Ellison had a history of diabetes and hypertension and that he had been taking aspirin and Feldene[4] but had stopped taking both drugs prior to the procedure. (Abel Dep. 77-78, 82; *see also* Pl.'s Super Resp. Ex. A at 4.) Preoperatively, Ellison's blood pressure was 120/70, his pulse was 72, and his oxygen saturation was 99 percent. (Pl.'s Super Ex. A at 3; Abel Dep. 90.)

Dr. Abel testified that he began administering local anesthetic,[5] and that, at around the fifth injection, Ellison said that he felt a little nauseous. (*Id.* at 108.) Dr. Abel then cycled the blood pressure cuff and received a reading of "70s over 40s." (*Id.*) He also noticed that Ellison was diaphoretic, or sweaty, and placed a cool cloth on his forehead. (*Id.* at 117.) Dr. Abel then reclined Ellison back in the chair, recycled the blood pressure cuff, and got a reading in the range of "70s to 80s over 40s to 50s." (*Id.* at 109.) Within a minute, Ellison's blood pressure "had come back up towards . . . 100s to 110s over 70s," but he continued to feel nauseous. (*Id.* at 109-10.) Although Ellison said he was feeling better after about five minutes, Dr. Abel kept him in

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[3] Both Dr. Abel and Dr. Bender testified that Ellison appeared anxious at the start of the procedure. (Abel Dep. 108; Bender Dep. 38-51.) Dr. Bender also testified that she recalled Ellison saying he was nervous. (*Id.* at 38.)

[4] Feldene is the brand name for piroxicam, a nonsteroidal anti-inflammatory medication (NSAID).

[5]The procedure began around 9:00 a.m. (Exhibit D, Report of Contact).

the reclined position for a total of about ten minutes, and then asked him whether he was still feeling fine and whether he wanted to continue with the injections or stop the procedure. (*Id.* at 110-11.)

After Ellison said that he was "fine to continue," Dr. Abel brought the chair up to its prior position and continued administering the remaining local anesthetic, a total of fifteen to twenty more injections. (Def.'s Super Statement ¶ 18; Pl.'s Super Resp. ¶ 20-38; Abel Dep. at 111.) Upon completion of the injections, Dr. Abel noticed a second low blood pressure reading in the 50s over 20s range. (Def.'s Super Statement ¶ 20; Pl.'s Super Resp. ¶ 20-38; Abel Dep. at 111.) Dr. Abel asked Ellison whether he was feeling any nausea or light-headedness, and Ellison responded that he was not. (*Id.* at 112.) Dr. Abel then laid Ellison back in the chair to a flat position, and his blood pressure "slowly came back up," reaching 100s to 110s over 70s "in less than a minute." (*Id.* at 112-13.) Dr. Abel again asked Ellison whether he was comfortable continuing, and he said that he was. (*Id.* at 113, 118.) Because Ellison's blood pressure had "rebounded quickly" and because he said he wanted to continue, Dr. Abel sat Ellison back up and proceeded with the extractions. (*Id.* at 117-18.)

At some point during the extractions, Ellison said that he was feeling a little nauseous again, and Dr. Abel reclined him a third time. (*Id.* at 118-19.) Dr. Abel testified that Ellison "may have had some hypotension," or low blood pressure, at the time but that it was not "significant enough that [Dr. Abel] felt the need to write it down." (*Id.*) Although Ellison said that his nausea had gotten better within a minute of being reclined, Dr. Abel kept him reclined for three to five minutes before asking him whether he wanted to continue. (*Id.* at 119.) When Ellison said that he did want to continue, Dr. Abel brought him back up and proceeded with the

rest of the extractions. (*Id.*) Around the last extraction, Dr. Abel noticed a fourth blood pressure reading in the 60/30 range and again reclined Ellison, who was not complaining of nausea at the time. (*Id.*) Within a minute, his blood pressure came back up to 100s to 110s over 70s, but Dr. Abel nevertheless kept him reclined for three to five minutes. (*Id.* at 119, 121.) He then asked Ellison whether he was fine with having the final tooth extracted, and Ellison said yes. (*Id.* at 121.) Dr. Abel then completed the last tooth extraction with Ellison reclined "a little bit more" than he had been for the previous extractions. (*Id.*)

At the conclusion of the procedure, Dr. Abel kept Ellison reclined for ten to fifteen minutes, gradually bringing the chair back up over that time period. (*Id.* at 121-22.) Dr. Abel then spent a few minutes going over the postoperative instructions with Ellison, who remained seated, after which he had Ellison stand up, confirmed that he felt steady on his feet, and discharged him at around 10:30 a.m. with a prescription for Tylenol with codeine. (*Id.* at 122-23; Def.'s Super Ex. D.) Dr. Abel testified that he observed Ellison for about fifteen to twenty minutes in all. (Abel Dep. 124-25.) According to Dr. Bender, this was about five to ten minutes longer than a normal patient would be observed. (Bender Dep. 76-77.) Dr. Abel testified that Ellison "was moving his arms and legs and looked fine" when he left. (Abel Dep. 123.)[6]

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[6] After Ellison left, Dr. Abel and Dr. Bender wrote a note in the file summarizing the procedure. (Abel Dep. 123-24, 141-42.) The treatment note, which Dr. Abel signed at 11:12 a.m., did not document the number of episodes of hypotension Ellison experienced, how long each episode lasted, or his blood pressure readings. (*Id.* at 124.) It instead stated that "[t]hroughout the procedure patient exhibited symptoms of vasovagal syncope with blood pressure ranging as low [as] 50/20. With each episode the procedure was stopped and patient was placed into the [Trendelenburg] position [*i.e.*, tilted back in the dental chair so that the head is below the level of the heart] until blood pressure rose and patient reported feeling better." (Pl.'s Super Resp. Ex. A at 3, 5.)

Dr. Abel testified that he interpreted Ellison's hypotensive episodes as symptoms of vasovagal syncope, which he described as "anxiety causing him, his blood pressure to drop, to

According to VA pharmacy records, Ellison was counseled by a staff pharmacist at the VA at around 11:34 a.m. (Pl.'s Super Resp. Ex. G ["Partlowe Dep."] 18, 20, 24-25.) The pharmacist who counseled Ellison has no recollection of him; however, she testified that if a patient had reported feeling dizzy or nauseous, or if she noticed a patient with facial droop, slurred or abnormal speech, or abnormal gait, she would have questioned the patient as to whether he had conveyed that information to his doctor, and, if the patient continued to have a problem, she would have called someone to assist him. (*Id.* at 22, 29-30.) Although there is no record of precisely what time Ellison picked up his prescription after being counseled, the average wait time on the day in question was twenty-three minutes. (*Id.* at 20, 25.)[7] The pharmacist who counseled Ellison would have had no further contact with Ellison after counseling him. (*Id.* at 19.)

After leaving the pharmacy, Ellison went to the garage at the VA Medical Center, obtained his car, and attempted to drive himself home. (Def.'s Super Statement ¶ 43; Pl.'s Super Resp. ¶ 43-44.) A tow truck driver later found Ellison in his car, which was pulled over to the right side of the street at the curb, a short distance from the VA Medical Center and called 911.[8] (Pl.'s Super Resp. Ex. H ("Nelson Dep.") 10-12, 48.) The driver testified that construction

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feel nauseous." (Abel Dep. 114, 120-21, 128.) Because Ellison's symptoms resolved so quickly when he was reclined, and because Ellison said he felt fine to continue, Dr. Abel regarded vasovagal syncope as "the most likely" cause. (Abel Dep. 114.)

[7] The pharmacist testified that she was not aware of any record of Ellison's prescription being returned to stock, as would have happened had Ellison not picked up his prescription. (*Id.* at 32.)

[8] The United States characterizes Ellison's vehicle as having been found "a few streets from" the VA Medical Center. (Def.'s Super Statement ¶ 44.) Plaintiff characterizes the distance as not more than 100 yards. (Pl.'s Super Resp. ¶ 43-44.)

workers across the street told him that Ellison's car had been there for "a while." (*See id.* at 12-16.)

At around 1:22 p.m., the Philadelphia Fire EMS arrived at the scene and responded to Ellison, who was unconscious. (*See* Def.'s Super Ex. G (Philadelphia Fire EMS Report).) The EMTs transported Ellison to the Emergency Department of the Hospital of the University of Pennsylvania, where he was diagnoses as having suffered a left middle cerebral artery stroke and where he came under the care of Dr. Scott Kasner, a neurologist and the Director of the hospital's Comprehensive Stroke Center. (*See* Def.'s Kasner Ex. P (University of Pennsylvania Health System Discharge Summary).) In his November 18, 2008, report, Dr. Kasner states that a CT scan at the hospital "showed evidence of major early cerebral infarction in the left middle cerebral artery territory." (Pl.'s Kasner Opp'n Ex. B ["Kasner 11/18/08 report"] at 1.) Although the doctors treating Ellison explored the possibility of treating him with TPA, a drug used for thrombolysis, or dissolving a clot, Dr. Kasner concluded that "[t]hrombolysis was not an option because it was at least 3 hours since [Ellison] was last known to be normal and because of the very extensive early CT findings." (Kasner 11/18/08 report at 1; *see also* Kasner Dep. 18.)[9] Ellison "was hospitalized and had progressive brain swelling, requiring a left hemicraniectomy"

[9] Dr. Abel testified that an emergency room physician contacted him by telephone, informed him that Ellison had suffered a stroke, and asked when was the last time Ellison had been observed to be normal. (Abel Dep. 143-44.) Dr. Abel responded that he had last seen Ellison when he left the clinic around 10:30 a.m. but that it was possible that someone at the pharmacy had seen him. (*Id.* at 144.) The emergency room physician explained that the information was very important because they wanted to give him TPA therapy, so Dr. Abel went down to the pharmacy and asked whether Ellison had been there to pick up his medication, but no one had a specific recollection of seeing Ellison or a specific time or other information to give. (*Id.* at 145.) Dr. Abel also informed the emergency department physician about Ellison's dental appointment, including the episodes of hypotension, that they all had resolved quickly, and that Ellison had walked out of the clinic looking fine. (*Id.* at 146.)

on September 11, 2007. (Kasner 11/18/08 report at 1; *see also* Def.'s Kasner Ex. P.) After a protracted hospitalization, Ellison was discharged to rehabilitation, where he remained for many months, and eventually had his bone flap replaced. (Kasner 11/18/08 report at 1.)

B. Procedural History

On December 31, 2008, plaintiff, Cheryl Ellison, Ellison's wife and guardian, filed a malpractice complaint in the Philadelphia Court of Common Pleas against the Hospital of the University of Pennsylvania, the University of Pennsylvania Health System, the Trustees of the University of Pennsylvania, the University of Pennsylvania School of Dental Medicine, Mark Abel, D.M.D., Joseph Foote, D.M.D., Gerald A. Daly, D.D.S., and Roy Feldman, D.D.S. The following month, the United States removed the case to this court, certifying, pursuant to 28 U.S.C. § 2679(d), that the individual defendants were, at all times pertinent to the allegations of the complaint, acting as employees of the United States Veterans Administration Medical Center for purposes of the FTCA. The United States was thereafter substituted for the individual defendants, and plaintiff voluntarily dismissed the remaining defendants from the case. Following a period of discovery, the United States filed the instant motions to exclude proposed expert testimony and/or, in the alternative, for summary judgment. Plaintiff opposes the motions.

II. Legal Standards

A. Motion to Exclude

The admissibility of expert testimony is governed by Federal Rule of Evidence 702 ("Rule 702"), which provides as follows:

> If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto

> in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

Fed. R. Evid. 702. Consistent with "the 'liberal thrust' of the Federal Rules and their 'general approach of relaxing the traditional barriers to 'opinion' testimony,'" *Daubert*, 509 U.S. at 588 (citation omitted), the Third Circuit has characterized Rule 702 as reflecting "a liberal policy of admissibility," *Kannankeril v. Terminix Int'l, Inc.*, 128 F.3d 802, 806 (3d Cir. 1997).

The Third Circuit has "explained that Rule 702 embodies a trilogy of restrictions on expert testimony: qualification, reliability and fit." *Schneider ex rel. Estate of Schneider v. Fried*, 320 F.3d 396, 404 (3d Cir. 2003); *see also In re Paoli R.R. Yard PCB Litig.*, 35 F.3d 717, 741-43 (3d Cir. 1994).

Qualification "refers to the requirement that the witness possess specialized expertise," which requirement the Third Circuit has interpreted liberally, holding that "'a broad range of knowledge, skills, and training qualify an expert.'" *Schneider*, 320 F.3d at 404 (quoting *Paoli*, 35 F.3d at 741).

An expert's opinion must also be reliable, or "based on the 'methods and procedures of science' rather than on 'subjective belief or unsupported speculation.'" *Paoli*, 35 F.3d at 742 (quoting *Daubert*, 509 U.S. at 590). In other words, "the expert must have 'good grounds' for his or her belief." *Id.* (quoting *Daubert*, 509 U.S. at 590). The Supreme Court and the Third Circuit have identified a number of factors that a district court should consider in determining whether proposed expert testimony is reliable:

> (1) whether a method consists of a testable hypothesis; (2) whether the method has been subject to peer review; (3) the known or potential rate of error; (4) the

> existence and maintenance of standards controlling the technique's operation; (5) whether the method is generally accepted; (6) the relationship of the technique to methods which have been established to be reliable; (7) the qualifications of the expert witness testifying based on the methodology; and (8) the non-judicial uses to which the method has been put.

Id. at 742 n.8 (citing *Daubert*, 509 U.S. at 593-94, and *United States v. Downing*, 753 F.2d 1224, 1238 (3d Cir. 1985)). These factors, however, "are neither exhaustive nor applicable in every case." *Kannankeril*, 128 F.3d at 806-07; *see also Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137, 141 (1999) (noting that "*Daubert*'s list of specific factors neither necessarily nor exclusively applies to all experts or in every case"). Rather, "[t]he inquiry envisioned by Rule 702 is . . . a flexible one . . . focus[ed] . . . on principles and methodology, not on the conclusions they generate." *Daubert*, 509 U.S. at 594-95. The question is not whether the proponent of the expert has demonstrated that his or her opinion is correct or persuasive enough to meet the party's burden of proof, but whether the opinion is based on reliable methodology and reliably flows from that methodology and the facts at hand. *Heller v. Shaw Indus., Inc.*, 167 F.3d 146, 152 (3d Cir. 1999) (noting that the Court in *Daubert* "[c]learly . . . envisioned cases in which expert testimony meets the *Daubert* standard yet is 'shaky'"); *Paoli*, 35 F.3d at 744 (noting that a judge "might think that there are good grounds for an expert's conclusion even if the judge thinks that there are better grounds for some alternative conclusion, and even if the judge thinks that a scientist's methodology has some flaws such that if they had been corrected, the scientist would have reached a different result").

Finally, an expert's testimony must fit the issues in the case by providing "a valid scientific connection to the pertinent inquiry" in the case. *Id.* at 591-92.

Under the Federal Rules of Evidence, the trial judge "acts as a gatekeeper, preventing

opinion testimony that does not meet the requirements of qualification, reliability and fit from reaching the jury." *Schneider*, 320 F.3d at 404; *see also Daubert*, 509 U.S. at 589 ("[U]nder the Rules the trial judge must ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable."). The burden is on the proponent of the evidence—here the plaintiff—to establish admissibility by a preponderance of the evidence. *Padillas v. Stork-Gamco, Inc.*, 186 F.3d 412, 417-18 (3d Cir. 1999); *Paoli*, 35 F.3d at 744.

B. Motion for Summary Judgment

A motion for summary judgment should be granted "if the pleadings, the discovery and disclosure materials on file, and any affidavits show that there is no genuine issue as to any material fact and that the movant is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(c)(2). Material facts are facts that "might affect the outcome of the suit under the governing law." *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986). A factual issue is "genuine" if "the evidence is such that a reasonable jury could return a verdict for the non-moving party." *Id.*

In evaluating a motion for summary judgment, "[t]he evidence of the non-movant is to be believed, and all justifiable inferences are to be drawn in [the non-movant's] favor." *Id.* at 255. The moving party bears the initial burden of demonstrating the absence of a genuine issue of material fact. *See Celotex Corp. v. Catrett*, 477 U.S. 317, 323 (1986). Once the moving party has met its burden, the nonmoving party must "come forward with 'specific facts showing that there is a *genuine issue for trial*.'" *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 587 (1986) (quoting Fed. R. Civ. P. 56(e)). Where, as here, the moving party seeks summary judgment as to a claim on which the nonmovant will bear the burden of proof at trial, the nonmovant, to avoid summary judgment, must make a showing sufficient to establish each

element essential to its case. *See Celotex*, 477 U.S. at 322-23.

III. Discussion

As this is a medical malpractice action brought pursuant to the FTCA, liability is governed by state law. *See* 28 U.S.C. § 1346(b)(1); *DeJesus v. U.S. Dep't of Veterans Affairs*, 479 F.3d 271, 279 (3d Cir. 2007) (liability of the United States under the FTCA is determined by the law of the state where the allegedly tortious act occurred). Under Pennsylvania law, to prevail in a medical malpractice action, a plaintiff must establish (1) a duty owed by the physician to the patient, (2) a breach of that duty by the physician, (3) that the breach was the proximate cause of, or a substantial factor in, bringing about the harm suffered by the patient, and (4) damages suffered by the patient that were a direct result of that harm. *Mitzelfelt v. Kamrin*, 584 A.2d 888, 891 (Pa. 1990); *see also Toogood v. Rogal*, 824 A.2d 1140, 1145 (Pa. 2003). Because negligence by a physician "encompasses matters not within the ordinary knowledge and experience of laypersons," a medical malpractice plaintiff generally "must present medical expert testimony to establish that the care and treatment of the plaintiff by the defendant fell short of the required standard of care and that the breach proximately caused the plaintiff's injury."[10] *Toogood*, 824 A.2d at 1145.

Dr. Super is plaintiff's expert as to standard of care, and Dr. Kasner is plaintiff's expert regarding causation. Accordingly, testimony from both experts is necessary for plaintiff to prevail on her malpractice claim. *See id.* The United States seeks to exclude both experts from

[10] There is an exception to this requirement of expert testimony "'where the matter is so simple or the lack of skill or care so obvious as to be within the range of experience and comprehension of even non-professional persons.'" *Id.* (quoting *Hightower-Warren v. Silk*, 698 A.2d 52, 54 n.1 (Pa. 1997)). Plaintiff does not argue that this narrow exception is applicable here.

testifying at trial, primarily on the basis that their opinions are unreliable. The United States also seeks summary judgment, arguing that if either expert is excluded, plaintiff will be unable to establish an essential element of her claim, and that even if the experts are permitted to testify, their testimony is still insufficient. The court will address the proposed testimony of each expert in turn.

A. Stuart Super, D.M.D. (Standard of Care)

1. Dr. Super's Background and Opinions

Dr. Super has been an oral and maxillofacial surgeon for over thirty-seven years. (Pl.'s Super Opp'n Ex. A ["Super 11/20/09 report"] 1 & exhibit thereto (curriculum vitae).) He received his D.M.D. from the Harvard School of Dental Medicine in 1968 and completed his training in oral and maxillofacial surgery at Mount Sinai Hospital in New York in 1971. (*Id.*) In 1972, he entered academic medicine at the School of Dental Medicine at the University of Pennsylvania, and with the exception of one year in which he undertook further surgical training, he has been an academic physician teaching and practicing oral and maxillofacial surgery since that time. (*See id.*) Since 1998, Dr. Super has served as Chief of Oral and Maxillofacial Surgery at Lennox Hill Hospital in New York, maintaining a teaching affiliation with New York University's College of Dentistry and its surgical residency program. (*Id.*) In addition to his teaching responsibilities, Dr. Super maintains a private practice in oral and maxillofacial surgery through which he sees approximately forty patients per week and performs three to four major reconstructive surgeries in the hospital per week. (*Id.*) Dr. Super also has served as both an examiner and a section leader for the American Board of Oral and Maxillofacial Surgery, which creates and administers the oral examinations given to candidates for certification by the Board.

(*See id.*) In this capacity, Dr. Super has participated in establishing the standard of care on which candidates in his field are examined. (*See id.*; Super Dep. 39-40.)

In his November 20, 2009, report, Dr. Super stated his opinion that "there was a serious deviation from the standard of care" in this case. (Super 11/20/09 report at 2.) In his written reports[11] and deposition testimony, Dr. Super has expressed the view that the standard of care for a patient in Ellison's circumstances—*i.e.*, a forty-nine-year-old man with a significant medical history undergoing an elective dental procedure, who experiences multiple episodes of hypotension with blood pressure readings as low as 50s/20s despite having previously undergone prior dental treatment without this cardiovascular response—required that the procedure be stopped and that Ellison be placed under medical supervision. (*See id.*; Super 3/1/10 report at 1; Super Dep. 41-42, 87-88, 94, 106.) In particular, Dr. Super has opined that Dr. Abel violated the standard of care (1) by continuing with Ellison's tooth extractions (a) following his first episode of hypotension and (b) in the face of multiple episodes of hypotension, without obtaining a medical consult, and (2) by failing to place Ellison under medical supervision for several hours in the VA dental clinic or another medical setting, such as an emergency room. (Super 11/20/09 report at 2; *see also* Super 3/1/10 report at 1; Super Dep. 41-42, 87-88, 94, 106.)

In his January 11, 2010, supplemental report, Dr. Super stated that the opinions in his November 20, 2009, report were based on his "37 years of experience in Oral and Maxillofacial Surgery, [and] in teaching hundreds of medical/dental students, residents and other surgeons," as well as his practice, teaching, and consulting "all over the world." (Super 1/11/10 report.) Dr.

[11] In addition to November 20, 2009, report, Dr. Super completed two supplemental reports dated January 11, 2010 (Pl.'s Super Opp'n Ex. B), and March 1, 2010 (Pl.'s Super Opp'n Ex. C).

Super also referenced his experience as a section leader for the American Board of Oral and Maxillofacial Surgery, in which capacity he "made up oral examinations for candidates for diplomat status," challenging them to "demonstrate the appropriate standards of care." (*Id.*) In a further supplemental report dated March 1, 2010, Dr. Super stated that the thirty-seven years of teaching and practice experience on which his standard of care opinions are based includes "experience with the management of hypotensive and syncopal and presyncopal patients." (Super 3/1/10 report at 1.) He also stated that his opinions are based on "the medical literature and texts including without limitation the articles referenced by Dr. Kasner [plaintiff's causation expert], Dr. Fonseca [defendant's standard of care expert]," and two additional publications identified in the letter (and discussed below). (*Id.* at 1-2.)

2. Motion to Exclude

The United States does not challenge Dr. Super's professional qualifications but seeks to exclude his proposed standard of care testimony on grounds of reliability and fit (or relevance).

a. Reliability

In arguing that Dr. Super's testimony is unreliable, the United States invokes two of the reliability factors identified by the Supreme Court and the Third Circuit: whether the method is generally accepted and its relationship to methods which have been established to be reliable. (Def.'s Super Mem. 10-21; *see also id.* at 8-9 (citing reliability factors summarized by the Third Circuit in *Paoli*, 35 F.3d at 742 n.8, including "whether the method is generally accepted" and "the relationship of the technique to methods which have been established to be reliable").) As to the former, the United States argues that Dr. Super cannot establish that his opinions reflect the standard of care generally accepted by other oral surgeons, as opposed to his personal

preference, because (1) he conceded at his deposition that he had no way of knowing whether a significant number of oral surgeons would disagree with him, and (2) he is unable to cite medical literature that supports his opinions regarding the standard of care. (*See id.* at 10-17.) As to the latter, the United States argues that Dr. Super's opinions are also unreliable because they are contradicted by a leading text that is used to teach dental students. (*See id.* at 17-21.)

With respect to the government's argument based on Dr. Super's deposition testimony that he could not say whether other oral surgeons would agree or disagree with him, the Third Circuit rejected a similar argument in *Schneider ex rel. Estate of Schneider v. Fried*, 320 F.3d 396 (3d Cir. 2003). In that case, the district court excluded the testimony of one of the plaintiffs' standard of care experts, an interventional cardiologist, on the basis of his statement at trial that

> I can't comment on what individual cardiologists were doing throughout the country because . . . frankly, I don't know what each individual cardiologist was doing at the time. You know what I can only comment about was my practice—my interpretation of the literature and my feelings and how the literature should have been applied to clinical practice.

Id. at 408. The district court concluded that the expert "could not testify about the legal standard of care since an opinion about the legal standard of care must be based on what is considered reasonable and acceptable in the entire community, not just the expert's own practice." *Id.* at 407. On appeal, the Third Circuit reversed, declining to find the challenged comment dispositive as to whether the expert could testify reliably about the general standard of care. *See id.* at 408-09. Noting that the expert had testified extensively about the general standard of care before making the challenged comment, the Third Circuit concluded that the expert had "demonstrated that he had formed an opinion about the legal standard of care and that the opinion had a reliable

basis." *Id.*[12]

The same is true here. In arguing that Dr. Super failed to establish that his views represented a generally accepted standard of care, the United States relies on the following excerpt from his deposition:

> Q Do you know of other oral surgeons who take the same view as you on this?
>
> A Well, I didn't do an interview of other oral surgeons, no.
>
> [. . .]
>
> Q But I guess my question is do you believe that there are a significant number of oral surgeons who would disagree with you?
>
> A I would have no way of knowing that, but I – I can't answer that question. I wouldn't have any – I have no way of knowing that.
>
> Q Is it your opinion that your description of the appropriate way to handle a patient who experiences multiple episodes of hypotension but does not lose consciousness, that that is the only correct way to handle such a patient?
>
> A I think it's the correct way and that's my opinion.

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[12] The Pennsylvania Superior Court also has declined to infer from a medical expert's use of the first person that the expert's testimony is limited to his own, personal standard of care where the expert's testimony as a whole suggests that the expert is testifying as to the general standard of care. *See Joyce v. Blvd. Physical Therapy & Rehab. Ctr., P.C.*, 694 A.2d 648, 656 (Pa. Super. Ct. 1997) (orthopedic surgeon's use of the first person in describing the standard of care "did not necessarily mean that he was presenting a personal opinion" where surgeon's opinion "[i]n its entirety . . . could have reflected the relevant standard of care"); *Maurer v. Trustees of the Univ. of Pa.*, 614 A.2d 754, 759-60 (Pa. Super. 1992) (rejecting the argument that a doctor's statement that "[a]s soon as *I* had an increase in alkaline phosphates, . . . *I* would have started Didronel" meant that he testified only to his own, personal standard of care where it was reasonable to infer that doctor intended his answer to be responsive to a question asking for his opinion "in accordance with acceptable medical practice," but holding that expert's standard of care testimony should have been excluded for other reasons (citations and internal quotation marks omitted)).

(Def.'s Super Mem. 12 (quoting Super Dep. 148, 153-54).) Dr. Super went on to explain, however, that although he did not interview other oral surgeons, he does in fact "know of other oral surgeons who would act in [a] similar manner" because he has trained oral surgeons over the years, and "this is what we train these surgeons to do." (Super Dep. 149.) Dr. Super also testified that this case is the type of case he discussed as an examiner for the American Board of Oral and Maxillofacial Surgery, explaining:

> [H]aving been on the board, we discuss cases, situations like this. We discuss the safe management of oral surgical cases, and these are the types of cases we discuss and put – we put candidates taking the exam in that situation and say how would you manage it? And there's a right answer and a wrong answer . . . .

(*Id.*) Elsewhere in his deposition, moreover, Dr. Super explained that he understands the term "standard of care" to pertain to "the deliverance and application of a professional care, which would be considered to be appropriate and correct by a practitioner in a given situation and it's been established by the profession to be . . . appropriate and . . . the right procedure to be carried out" (*id.* at 37), and stated that his standard of care testimony in this case is based on "[a]ll my years of training, experience and teaching and reading and my experience as a practicing oral and maxillofacial surgeon and teaching residents and dental students and my awareness of how to safely manage patients in the dental situation" (*id.* at 42). Taken as a whole, Dr. Super's testimony is that he has formulated an opinion as to the general—as opposed to simply his own, personal—standard of care and that, based on his experience, he had a reliable basis for doing so. *See Schneider*, 320 F.3d at 408-09 (concluding that a medical expert's opinion about the standard of care had a reliable basis based on the expert's qualifications and experience). Therefore, the deposition testimony cited by the United States does not render Dr. Super's testimony unreliable.

The government's remaining arguments that Dr. Super's proposed testimony is unreliable relate to the lack of support for—and contradiction of—his opinions in the medical literature concerning the treatment of patients who experience vasovagal syncope during dental procedures. The court notes, as an initial matter, that the Third Circuit recognized in *Schneider* that a standard of care opinion may be reliable even in the absence of medical literature on point. *See* 320 F.3d at 406. In that case, in addition to excluding expert testimony from the interventional cardiologist discussed above, the district court also excluded the testimony of a second standard of a care expert, an invasive cardiologist, based in part on the fact that the literature he cited as a basis for his opinion did not address the specific issue to which his testimony was directed, namely, whether it was a violation of the standard of case to administer the drug Procardia sublingually as a pre-treatment for an angioplasty in order to prevent coronary vessel spasm during the procedure. *Id.* at 405-06. The expert had based his testimony on his experience as a cardiologist as well as on the published literature on the drug; however, he admitted on cross-examination that the literature he cited did not specifically address the issue of vessel spasm. *Id.* at 405. On appeal, the Third Circuit declined to address whether the literature the expert relied on was relevant to his testimony but reversed the exclusion of the testimony nonetheless, concluding that the expert's experience, which included regularly advising interventional cardiologists during surgical procedures and consulting with them about which drugs should or should not be given to patients undergoing angioplasties, "render[ed] his testimony reliable, demonstrate[d] that his testimony [was] based on 'good grounds,' and that the Magistrate Judge abused his discretion by excluding it." *Id.* at 406.

The United States argues that *Schneider* is inapposite because although the medical

literature on which the expert in that case relied was not directly on point, it nevertheless supported the expert's opinions, whereas here there is no literature that supports Dr. Super's views. (Def.'s Super Mem. 11 n.7 & 13 n.8.) However, the Third Circuit specifically disavowed reliance on the literature cited by the expert in holding that his testimony was reliable. *Schneider*, 320 F.3d at 406 ("Without delving into the question whether articles discussing the use of Procardia for one purpose are relevant to whether it was a violation of the standard of care to administer it for another purpose, we note that expert testimony does not have to obtain general acceptance or be subject to peer review to be admitted under Rule 702."); *id.* (concluding that expert's experience "render[ed] his testimony reliable").[13]

The government also cites *United States v. Frazier*, 387 F.3d 1244 (11th Cir. 2004) (en banc), for the proposition that the fact that an expert "'may be qualified by experience does not mean that experience, standing alone, is a sufficient foundation rendering reliable *any* conceivable opinion the expert may express . . . .'" (Def.'s Super Reply 2 (quoting *Frazier*, 387

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[13] *Reger v. A.I. duPont Hospital for Children of the Nemours Foundation*, 259 F. App'x 499 (3d Cir. 2007), and *Daddio v. A.I. DuPont Hospital for Children of the Nemours Foundation*, 650 F. Supp. 2d 387 (E.D. Pa. 2009), also cited by the government, are not to the contrary. In *Reger*, an unpublished decision in which the court did not address the facts at any length, the Third Circuit held that the district court did not abuse its discretion in excluding the plaintiff's causation expert whose opinion "was not supported by citation or reference to any scientific data or texts." 259 F. App'x at 500. However, the court did not address, much less overrule, its prior holding in *Schneider* that "[w]here there are other factors that demonstrate the reliability of the expert's methodology, an expert opinion should not be excluded simply because there is no literature on point." *Schneider*, 320 F.3d at 406. In *Daddio*, the court expressly noted that it need not decide whether the plaintiffs' expert's proposed standard of care testimony was unreliable, as it had excluded the expert's testimony on causation, thus requiring the entry of summary judgment for the defendants. 650 F. Supp. 2d at 410. Although the court nevertheless went on to address its concerns about the expert's standard of care opinion, including the lack of support for the opinion in the articles presented by the plaintiffs as well as the expert's own lack of experience with the procedure at issue, it did not hold that standard of care testimony is necessarily unreliable in the absence of medical literature on point. *See id.*

F.3d at 1261)), but that decision is entirely consistent with *Schneider*. *Frazier* was an appeal from a criminal kidnapping conviction in which the defendant argued that the district court had abused its discretion in excluding a defense expert's proposed testimony that based on the victim's description of a sexual assault by the defendant, "'it would be expected that some transfer of either hairs or seminal fluid would occur.'" 387 F.3d at 1248, 1254 (emphasis omitted). The Eleventh Circuit affirmed the exclusion of the expert's testimony as unreliable, notwithstanding that he was qualified as an expert in forensic investigations. *Id.* at 1263. Significantly, however, the court did not hold that experience alone could not be a sufficient basis on which to find the expert's testimony reliable. Rather, the court held that "[s]ince [the expert] was relying solely or primarily on his experience, it remained the burden of the proponent of this testimony to explain how that experience led to the conclusion he reached, why that experience was a sufficient basis for the opinion, and just how that experience was reliably applied to the facts of the case," which burden the defendant had not met. *Id.* at 1265. Although the expert had testified that his opinion was based on his experience and on various texts in forensic investigation, he failed to explain how either supported his opinion. *Id.* at 1265. Indeed, with regard to experience, the expert had "identified only a single investigation he had worked on in which hair evidence was recovered during the investigation of a serial rapist." *Id.*

Here, in contrast, not only did Dr. Super state that his more than thirty-seven years of experience as both a teacher and a practicing oral surgeon "includ[ed] experience with the management of hypotensive and syncopal and presyncopal patients" (Super 3/1/10 report at 1), but he also explained that, over the years, he has stopped a dental procedure more than 100 times because the patient experienced syncope or presyncope. (Super Dep. 17, 99.) Dr. Super further

testified that in all of those cases in which the patient was over forty years old with any significant medical history, *i.e.*, any "[h]istory of heart trouble, significant hyper tension, diabetes, being on specific cardiac medication," he sent the patient for a medical consult (*id.* at 101), and that this was how he taught dental students and oral surgeons to respond to emergencies in the dental chair (*id.* at 33, 149).

Moreover, as noted, Dr. Super cited medical literature in support of his opinions, including (1) Ellen B. Grimes, *The Syncopal Patient in the Dental Office*, Journal of Practical Hygiene 39 (Nov./Dec. 2001) [the "Syncopal Patient Guide"] (Def.'s Super Ex. N), and (2) LCDR V.C. Lapointe, DC, USN, *Pocket Guide to Medical Emergencies in the Dental Office* [the "Pocket Guide"] (Def.'s Super Ex. M). (Super 3/1/10 report at 2.) Dr. Super also noted that his opinions were based on the literature referenced by Dr. Fonseca, the government's standard of care expert, including Stanley F. Malamed, *Medical Emergencies in the Dental Office* (5th ed. 2000) (Def.'s Super Ex. H).[14] (*See* Super 3/1/10 report at 1.)

At his deposition, Dr. Super testified as to how these references support his opinion regarding the standard of care. While acknowledging that "no article talks to this specifically as standard," Dr. Super explained that the cited references nonetheless corroborate his opinion as to "the correct thing to do." (Super Dep. 43-44.) In particular, Dr. Super testified that the discussion of "Management of Syncope or Unconsciousness" in the Pocket Guide is consistent

[14] In addition to these references concerning syncope in the dental office, Dr. Super also stated that his opinions were based on the articles referenced by Dr. Kasner, plaintiff's expert on causation. (Super 3/1/10 report at 1.) Dr. Super testified that although these articles do not provide a "cookbook series of steps" for the treatment of a patient who is experiencing multiple episodes of syncope, they provided insight into the dangers of multiple syncopes and "guidance to act accordingly when patients are having multiple episodes and to turn it over to those who can handle that." (*See* Super Dep. 142-48.)

with his opinion in that it identifies as "Dental Treatment Considerations" for syncopal patients (1) "[d]elay[ing] further dental treatment 24 hours especially if the patient lost consciousness" and (2) "[d]etermining the cause of the syncopal episode prior to completing further treatment." (Def.'s Super Ex. M at 18-19; *see* Super Dep. 45, 77-78.) Although Dr. Super did not specifically discuss the Syncopal Patient Guide, plaintiff argues that that publication also supports Dr. Super's opinions in that it also recommends that following a syncopal episode, "[a]n attempt should be made to determine the cause of the syncope" and "[a]ll dental treatment should be suspended for the day, and since syncope can recur, arrangements should be made to have an emergency contact escort the patient home." (Def.'s Super Ex. N at 42; *see* Pl.'s Super Mem. 10, 17.) Dr. Super also testified that the Malamed text cited by Dr. Fonseca supports his opinion in that it advises that "[a]fter recovering from a period of syncope (of any duration), the victim should not undergo additional dental treatment the rest of that day" and notes that "research has demonstrated that the body requires up to 24 hours to return to its normal state." (Def.'s Super Ex. H at 132; *see* Super Dep. 110-11.)

The government argues that none of these publications supports Dr. Super's opinions because they are all addressed to the management of patients who experience syncope, which includes a loss of consciousness. Because Ellison never lost consciousness, the government contends, he experienced only presyncope, and the literature Dr. Super cites is therefore inapplicable to him. (*See* Def.'s Super Mem. 15-17.) The government further argues that the Malamed text affirmatively contradicts Dr. Super's opinion in that it does not require postponement of further dental treatment following an episode of presyncope but permits resumption of the planned dental treatment "if both the doctor and the patient feel it is

appropriate." (Def.'s Super Ex. H; *see* Def.'s Super Mem. 18-21.)

As the government notes, the literature cited by Dr. Super identifies various "phases" or "stages" of syncope, distinguishing the syncopal from the presyncopal phase based on whether the patient loses consciousness. (*See* Def.'s Super Ex. H at 128; Def.'s Super Ex. M at 18; Def.'s Super Ex. N at 41.) Although Dr. Super acknowledged this distinction, defining presyncope as "the stage right before total loss of consciousness," he also testified that the distinction is not absolute and that "many practitioners," including himself, would define syncope to include "severe hypotension and cerebral lack of oxygen that's low enough." (Super Dep. 18, 46-47, 79; *see also id.* 70-71 (defining syncope in terms of "a severe drop in blood pressure and pulse with near loss of consciousness if not loss of consciousness"), 17 (same), 49 (same).) Using this definition, Dr. Super stated that he would categorize Ellison as having experienced syncope, as his blood pressure and pulse "were at the level we're stating; abnormal, low, . . . near shock."[15] (Super Dep. at 49-50.)

Dr. Super also testified that the appropriate clinical management for a patient experiencing syncope or presyncope depends on a variety of factors other than whether the patient experienced an absolute loss of consciousness, including the patient's age, whether the

[15] Plaintiff argues that Dr. Super's assessment is reinforced by the medical personnel involved in this case, including Dr. Abel, who described Ellison in both his medical note and his deposition as having exhibited symptoms of "vasovagal syncope" and Dr. Roy Feldman, who testified that Ellison had experienced a "transient syncopal episode." (Pl.'s Super Mem. 21 (citing Pl.'s Super Mem. Ex. Q; Abel Dep. 114, 117, and Pl.'s Super Mem. Ex. S ["Feldman Dep."] 142).) The government responds that these doctors were merely using an "umbrella term for the condition, which has distinct stages and clinical manifestations." (Def.'s Reply 6.) The court declines to speculate as to what the doctors meant by these references but notes that they tend to support Dr. Super's statement that the "line of distinction" between presyncope and syncope is "[o]ften . . . hard to draw." (Super Dep. 18.)

patient had a significant medical history, the degree and severity of the hypotension, and how many times and over what period of time it occurs, among others. (*See* Super Dep. 19-20, 47, 82, 87-88; *accord* Super 3/1/10 report at 1 (commenting that it is "irrelevant" to the appropriate standard of care in this case whether "a healthy patient with a single pre-syncope episode may continue with treatment" as Ellison "was a patient with a significant medical history"); Super 11/20/09 report at 2 (noting that Ellison had several risk factors for stroke).) The government emphasizes that the Malamed text permits a practitioner to continue with a dental procedure when the patient does not lose consciousness.[16] (Def.'s Super Mem. 19.) The text makes clear, however, that "[f]ollowing management of presyncope, . . . [t]he planned dental treatment may proceed *only if both the doctor and the patient feel it is appropriate*" (Def.'s Super Ex. H at 130 (emphasis added), and here Dr. Super has identified additional factors to support his opinion that, given Ellison's particular clinical presentation, the standard of care required that dental treatment be suspended and Ellison referred for medical evaluation. *Cf. Joyce*, 694 A.2d at 656 ("[T]he standard of care in medical malpractice actions is first and foremost what is reasonable under the circumstances." (citing *Collins v. Hand*, 246 A.2d 398 (Pa. 1968))).

Finally, the court notes that at least one of the references cited by Dr. Super—the Pocket Guide—is consistent with his opinion that stopping treatment may be necessary even where there is no loss of consciousness. Although, as the government notes, that reference distinguishes

[16] Although plaintiff notes that Dr. Super did not acknowledge the Malamed text as authoritative (Pl.'s Super Opp'n 23), the text is cited in both the Pocket Guide and the Syncopal Patient Guide (*see* Def.'s Super Exs. M at 32 (citing prior edition), N at 42), and Dr. Super himself testified that the text supported his own views (Super Dep. 110-11; *see also* Super 3/1/10 report at 1 (medical literature and texts on which Super's opinions are based include article referenced by Dr. Fonseca)).

presyncope from syncope in part on the basis of whether the patient loses consciousness, the particular "Dental Treatment Considerations" that Dr. Super identified as supporting his opinions do not appear to be limited to patients who have lost consciousness. (*See* Def.'s Super Ex. M at 18-19.) For example, the first such consideration states "[d]elay further dental treatment 24 hours *especially if the patient lost consciousness*," suggesting that delay might be appropriate even for patients who did not lose consciousness. (*Id.* at 18 (emphasis added).)[17]

The court emphasizes that with respect to the reliability of Dr. Super's proposed testimony, the question is not whether Dr. Super's opinions are correct but whether those opinions are based on "good grounds." The record establishes that in his over thirty-seven years of teaching and practicing as an oral and maxillofacial surgeon, Dr. Super has had extensive experience managing syncopal and presyncopal patients, teaching dental students and oral surgeons how to respond to emergencies in the dental chair, and examining candidates for the American Board of Oral and Maxillofacial Surgery on safe management of oral surgical cases. Moreover, to the extent that Dr. Super disagrees with some of the relevant medical literature, he has offered a reasonable explanation for his disagreement. Accordingly, the court finds that plaintiff has demonstrated by a preponderance of the evidence that Dr. Super's proposed

[17] The government makes much of the fact that Dr. Super testified that the "Dental Treatment Considerations" identified in the Pocket Guide are not "requirements," arguing that in light of this concession, the Pocket Guide does not support Dr. Super's opinion. (Def.'s Super Mem. 15.) Read in context, however, Dr. Super's testimony makes clear that although he did not regard those considerations as requirements for every case, regardless of the patient's circumstances, the considerations nevertheless are "important things to consider," and failure to follow them might be a violation of the standard of care depending on "the clinical situation that [the patient] presented with." (*See* Super Dep. 80-84 (noting that the standard of care depends on such factors as "medical background, the medical compromise, the degree of hypotension, the severity of the hypotension, how many times it occurs, [and] over what period of time").)

testimony is reliable.[18]

b. Fit/Relevance

The government also argues that because Dr. Super's proposed testimony reflects only his personal custom and practice, it is irrelevant, as it will not assist the trier of fact in determining whether there was a violation of the standard of care, as required in a medical malpractice case. (Def.'s Super Mem. 21-23.) As discussed above, however, the court concludes that, taken as a whole, Dr. Super's testimony reflects his opinions regarding the general standard of care and is therefore directly relevant to the issues in this case. Accordingly, the court will deny the government's motion to exclude the proposed testimony of Dr. Super.[19]

3. Motion for Summary Judgment

Because the court will deny the government's motion to exclude from trial the proposed testimony of Dr. Super, the court will also deny the government's motion for summary judgment, to the extent that the motion is based on the argument that without Dr. Super, plaintiff will be unable to meet her burden to prove a violation of the standard of care. The government also argues that summary judgment is warranted, even if Dr. Super is permitted to testify, because his

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[18]The issues raised by the defendant are, of course, relevant for cross-examination at trial and consideration by the fact-finder in evaluating the testimony of the various expert witnesses.

[19] In *Northern v. Katz*, No. 05-2398, 2006 WL 3390386, at *5 (D. Kan. Nov. 22, 2006), on which the government relies, the court held that a proposed expert's opinions regarding the standard of care would not "help the jury understand and determine a fact in issue (i.e., the standard of care)," and were therefore inadmissible under Rule 702, where the expert's report gave no indication that the expert was familiar with the standard of care or that he had evaluated the defendant's conduct in relation to the appropriate standard of care, but instead appeared to express only the expert's personal opinion. As discussed in the preceding section, that is not the case here as Dr. Super has framed his opinions in terms of the applicable standard of care and has established a basis for his familiarity therewith.

opinions reflect only his personal custom and practice and are therefore insufficient to establish a breach of the applicable standard of care. (Def.'s Super Mem. 23.) This argument is no different from the government's argument that Dr. Super's testimony is irrelevant, which the court has rejected for the reasons set forth above, and the court will therefore deny the government's motion for summary judgment on this basis as well.

B. Scott Kasner, M.D. (Causation)

1. Dr. Kasner's Opinions

As noted, Dr. Kasner, who served as Ellison's attending neurologist at the Hospital of the University of Pennsylvania, is the plaintiff's expert on causation. Dr. Kasner's opinions regarding causation (and the bases therefor) are set forth in his written reports dated November 18, 2008 [the "November 18 report"] (Pl.'s Kasner Opp'n Ex. B), January 13, 2010 (Pl.'s Kasner Opp'n Ex. C), and March 8, 2010 (Pl.'s Kasner Opp'n Ex. D), and in his deposition testimony.[20]

It is undisputed that Ellison suffered an ischemic, or clot-related, stroke. (*See* Def.'s Kasner Statement ¶ 54; Kasner Dep. 47.) In his November 18 report Dr. Kasner went on to express the opinions (1) that "[t]he etiology of [Ellison's] stroke appears to be cardioembolic, specifically related to a prior occult myocardial infarction with myocardial scarring" (Kasner 11/18/08 report at 2); (2) that "Mr. Ellison's hypotension was a contributing factor in the widespread extent of his infarction" in that "[h]ypotension impairs global cerebral blood flow, promotes blood stagnation which contributes to thrombus [or clot] formation, and may impair clearance of thromboembolitic material" (*id.*); (3) that if Ellison's hypotension "could have been

[20] Dr. Kasner also prepared a written report dated November 20, 2009; however, that report relates not to causation but to Ellison's degree of disability as a result of his stroke. (Def.'s Kasner Ex. L.)

avoided or treated effectively, the stroke would likely never have occurred or would have been less extensive" (*id.* at 3); and (4) that if Ellison had been "more judiciously monitored for a brief time after his procedure to ensure that he was stable, his stroke symptoms would likely have been recognized much sooner and allowed an opportunity for timely intervention" (*id.*).

At his deposition, Dr. Kasner explained further his opinion as to how the episodes of hypotension Ellison experienced in the dental chair contributed to his stroke. First, Dr. Kasner addressed the observation in his November 18 report that an transesophageal echocardiogram performed at the hospital "demonstrated severe wall motion abnormality described as akinesis or hypokinesis consistent with a prior inferior myocardial infarction [or heart attack]." (Kasner 11/18/08 report at 2.) Dr. Kasner explained that "akinesis" means that some piece of the heart "doesn't move" and that "hypokinesis" means that it moves "less than normal." (Kasner Dep. 28.) He went on to explain that because the cardiologist used both terms as to Ellison, it was effectively the same as saying akinesis. (*See id.* at 28, 96.)[21] With respect to the relationship between Ellison's hypotension and his stroke, Dr. Kasner testified as follows:

> So strokes happen from – thromboembolic materials occur due [to] stagnant blood flow. So he has a part of his heart wall that doesn't move or minimally moves if it's hypokinetic. If that part of his heart wall has even more stagnation because his heart's pumping less, that will increase the stagnation, increase the propensity for clots to form. So if he had prolonged or repeated measure of hypotension, that will contribute to the development of thrombus formation.
>
> Furthermore, it will impede the clearance of these clots. And there's a number of studies that have shown that it's not only formation of a clot, but also the clearance of clots because of good flow through an artery that's also impaired by hypotension.

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[21] Dr. Kasner explained that "[i]t's very hard to ever really pin a cardiologist down to call something akinetic because the heart moves, so the wall moves a little bit always." (*Id.* at 96.) As a result, when a cardiologist says "severe hypokinesis or akinesis/hypokinesis or use that vergiage, that's, for all intents and purposes, the same thing as akinesis." (*Id.*)

> So having hypotension in somebody who has got this underlying problem, or once they have a stroke being hypotensive, both of those together contribute to the development of the stroke, the massive size of the stroke as well.

(*Id.* at 46-47.)

2. The Government's Motion to Exclude

Dr. Kasner is extremely well-credentialed, and the government does not challenge his qualifications as an expert in neurology. (Def.'s Kasner Mem. 9.) Rather, the government challenges his proposed testimony primarily on the basis that it is unreliable and, to a lesser extent, on grounds of fit.

The government's main challenge is to Dr. Kasner's conclusion that Ellison's stroke was cardioembolic, or caused by a clot that originated in the heart. The government argues that Dr. Kasner's opinion on this point is unreliable because (1) Dr. Kasner conceded that "[t]here is not a test to know absolutely where the clot particularly came from"; (2) Dr. Kasner did not use the "TOAST" criteria, a standardized method for classifying stroke subtype that is described in a textbook that Dr. Kasner himself edited, in determining that Ellison's stroke was cardioembolic; and (3) Dr. Kasner also failed to use standard diagnostic techniques to determine whether Ellison had arteriosclerosis, which would suggest an alternative cause for the stroke.[22] (Def.'s Kasner Mem. 12-15, 18-20.)

As to the government's first argument, the fact that there exists no test to identify the

[22] Gary H. Friday, M.D., one of the government's expert regarding causation, has expressed the opinion that Ellison's stroke "was due to thrombosis (i.e. blockage) of the left middle cerebral artery due to atherosclerosis caused by hypertension, diabetes, obesity, tobacco use, elevated lipids and periodontal disease." (Def.'s Kasner Ex. M at 9.)

source of the clot in a stroke victim does not undermine the reliability of Dr. Kasner's opinion. Dr. Kasner testified that he concluded that Ellison's stroke was cardioembolic by performing differential diagnosis-type process.[23] (Kasner Dep. 68.) The Third Circuit repeatedly has recognized differential diagnosis as a reliable methodology when appropriately performed. *See, e.g.*, *Kannankeril v. Terminix Int'l, Inc.*, 128 F.3d 802, 807-08 (3d Cir. 1997) (noting that the Third Circuit has "recognized 'differential diagnosis' as a technique that involves assessing causation with respect to a particular individual" and finding expert's differential diagnosis to have been reliably performed). Therefore, the lack of a specific diagnostic test is immaterial.

The government's remaining arguments concern the adequacy of Dr. Kasner's differential diagnosis process and, in particular, the degree to which he considered causes for Ellison's stroke other than cardioembolism. With respect to that process, Dr. Kasner testified that there is a "[s]omewhat standardized" methodology by which a neurologist determines the particular subtype of a patient's stroke:[24]

> So not everybody gets every test because there are many tests potentially to do to test for possible causes of a stroke. So you tend to look in the obvious places, and if you find a cause, you may stop there. You may look for other abnormalities.
>
> In Ellison's particular case, we did an echocardiogram that showed a low

[23] Dr. Kasner characterized differential diagnosis as "when you first assess a patient, the list of things that you consider as the possible diagnoses. And then by extension, the potential causes and all of the rest that goes along with that." (Kasner Dep. 68.) He agreed that in performing a differential diagnosis "[y]ou look at the facts and the circumstances and you eliminate them until you get down to the one that seems to be the most appropriate." (*Id.*)

[24] Dr. Kasner explained that there are five categories of ischemic stroke, or stroke due to lack of blood flow: "cardioembolic, where stroke comes from the heart; large vessel atherosclerotic disease; small vessel occlusive disease. There's a category that's called 'other determined cause,' which is the weird things that cause stroke from drug abuse to inflammatory vessel disease. Then there's cryptogenic, which mean[s] we couldn't figure out the cause." (Kasner Dep. 30.)

> injection fraction. We were concerned about some other potential abnormalities and did a transesophageal echocardiogram which showed this myocardial scarring. That is a well-defined cardioembolic source of stroke. We stopped there and said, Okay, we have identified the cause.

(Kasner Dep. 31.) Dr. Kasner testified that, at the time of Ellison's stroke, there was no point in performing any further tests to determine the cause of the stroke because such testing would have had no bearing on his treatment, as the only available therapy was medical therapy, which was already being provided.[25] (*Id.* at 32-33; *see also id.* at 94-95 (noting that "[i]f there's no point in doing any tests because there's no revascularization option, we won't do any of them in the acute setting").) Dr. Kasner acknowledged that neurologists "typically do a bunch of tests to figure out the cause of stroke," and that he later discussed with Ellison's wife the possibility of doing additional testing, including looking at Ellison's arteries, "[f]or the sake of completeness." (*Id.* at 33-36, 93-94.) However, he stated that he did not pursue the issue because he continued to believe that such testing would have "no real bearing on his outcome." (*Id.* at 34-36.)

As to the "TOAST" criteria, Dr. Kasner testified that these criteria were developed for a drug trial (the Trial of Org 10172 in Acute Stroke Treatment) in order to "somewhat standardize a nomenclature for stroke mechanisms or etiologies." (*Id.* at 89.) Under the TOAST classification, a stroke is regarded as "probable cardioembolic" if there are clinical data and studies consistent with cardioembolism and other causes are excluded and as "possible

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[25] Dr. Kasner stated, for example: "[i]f we looked at his carotid arteries and found narrowing, we would say, so what, because I'm not going to take him for carotid endarterectomy or carotid stent or any other avascularization procedure because he just had a devastating stroke." (*Id.* at 33.) Similarly, "[i]f we found narrowing of an intracranial blood vessel, an artery in his head, due to atherosclerosis, we have no standard therapy for that other than medical therapy. So if all roads were going to point to medical therapy during that setting and we found a reason for him to be on antithrombotic therapy, then we were done." (*Id.*)

cardioembolic" if there are clinical data and studies consistent with cardioembolism but other causes are not excluded. (*Id.* at 90-91; *see also* Def.'s Kasner Ex. O at 62.) Dr. Kasner conceded that using the TOAST criteria, Ellison's stroke would be possible, not probable, cardioembolic because Dr. Kasner had not performed vascular imaging studies to exclude a large vessel atherothrombotic cause. (Kasner Dep. 97; *see also id.* at 91-94 (discussing vascular imaging studies).) Dr. Kasner noted, however, that under the TOAST classification, Ellison's echocardiogram finding of akinesis/hypokinesis (which, for all intents and purposes, means akinesis) was a "high-risk cardiac source [of embolization." (*Id.* at 96.) Although Dr. Kasner acknowledged that the TOAST classification is "often used in clinical practice," he emphasized that the criteria are "designed not for clinical practice, but for a clinical trial where this was an important prospectively defined subtype differentiation." (*Id.* at 97.) He also stated that in practice—and in even in the trial—"there are many patients who don't get every test because it's not practical." (*Id.*)

With respect to the government's argument that Dr. Kasner's methodology is unreliable because he admittedly failed to perform tests that neurologists "typically" or "normally" do to determine the cause of stroke, the Third Circuit has held that a doctor is not required to rule out *all* alternative causes of a patient's illness in order to perform a reliable differential diagnosis. *Heller v. Shaw Indus., Inc.*, 167 F.3d 146, 156 (3d Cir. 1999). Rather, a differential diagnosis is only unreliable for failure to rule out alternative causes when either (1) the doctor "engaged in very few standard diagnostic techniques by which doctors normally rule out alternative causes *and* the doctor offered no good explanation as to why his or her conclusion remained reliable," or (2) the defendant "pointed to some likely [alternative] cause of the plaintiff's illness" and the

doctor "offered no reasonable explanation as to why he or she still believed" that was not the sole cause. *In re Paoli R.R. Yard PCB Litig.*, 35 F.3d 717, 760 (3d Cir. 1994); *see also Heller*, 167 F.3d at 156.

Here, Dr. Kasner has testified that as part of his differential diagnosis-type process he considered the possibility that Ellison had large artery disease, a plausible alternative cause identified by the government.

> Q. What other possibilities did you consider?
>
> A. So as we kind of discussed before, could he have had large artery narrowing someplace. I suppose that's still possible. Again, most of the time when you find one obvious cause you don't often, but sometimes, find another explanation. We didn't look for all the reasons previously discussed [*i.e.,* that it made no sense to pursue additional testing to determine cause of stroke because it would have no bearing on treatment], but it wasn't going to change the management. I think any other cause like from the list of weird causes and et cetera don't really apply. Those would be extremely unlikely.
>
> Q. Okay, but large artery disease was one of the alternative causes that presented itself; correct?
>
> A. A less likely, but possible, cause, yes.

(Kasner Dep. 68-69).

Dr. Kasner is essentially saying that in his opinion the echocardiogram finding of akinesis is such a high risk of cardioembolism that it makes other possible causes unlikely, even in the absence of testing to rule such other causes out. That is a sufficient explanation for his conclusion to find his opinion reliable. *See Heller*, 167 F.3d at 157 (noting that "a defendant's suggested alternative causes (once adequately addressed by plaintiff's expert) affect the weight that the jury should give the expert's testimony and not the admissibility of that testimony"). Other parts of Dr. Kasner's testimony are consistent with this interpretation. (Kasner Dep. 68

("[M]ost of the time when you find one obvious cause you don't often, but sometimes, find another explanation."), 98 ("Once you identify a high-risk source, typically that is enough to feel confident in the cause of the stroke.").)

Even if Dr. Kasner's opinion that the etiology of Ellison's stroke is cardioembolic were found to be unreliable, his testimony would not need to be excluded. Twice during his deposition, Dr. Kasner stated that his opinions would be little changed if Ellison's stroke had a vascular cause. When questioned whether he discussed with Ellison's wife the fact that testing her husband's carotid artery or other vessels "might make it clearer, might either strengthen or weaken your position, as to what caused the stroke," Dr. Kasner responded, "I don't remember that being an issue. I think actually if we knew he had a narrow artery, it would make this even *easier* to support the idea that hypotension caused or worsened his stroke. (Kasner Dep. 35 (emphasis added).) And later in his deposition, Dr. Kasner stated, "[w]e could also talk about how my opinion would change if he had a confirmed large-vessel stroke, if you'd like to go there, but [it] wouldn't really change the big picture issue very much." (*Id*. at 98.)

I do not find the government's argument based on Dr. Kasner's failure to use the TOAST criteria to classify Ellison's stroke compelling. As noted, although Dr. Kasner acknowledged that TOAST is "often used in clinical practice" (*id*. at 90), he explained (1) that the criteria were designed for use in a clinical trial where there is a particular need to have a standardized nomenclature, and (2) that in practice--and even in the clinical trial setting--it is often not practical to do every test. (*Id*. at 90, 97).

The government also argues that Dr. Kasner's testimony should be excluded because he cannot exclude the first unavoidable episode of hypotension as the cause of the process that led

to Ellison's stroke and thus cannot prove that anything the VA staff did was improper. (Def.'s Kasner Mem. 20-21). As plaintiff notes, however, a plaintiff in a medical malpractice action may satisfy her burden to establish a prima facie case of causation by showing that the physician's negligent act or omission increased the risk of harm to the patient and that the harm actually occurred. *Mitzelfelt v. Kamrin*, 584 A.2d 888, 892 (Pa. 1990); *Hamil v. Bashline*, 392 A.2d 1280, 1286 (Pa. 1978) ("Once a plaintiff has introduced evidence that a defendant's negligent act or omission increased the risk of harm to a person in plaintiff's position, and that the harm was in fact sustained, it becomes a question for the jury as to whether or not that increased risk was a substantial factor in producing the harm."). Thus, Dr. Kasner need not be able to say which episode of hypotension led to formation of the clot.

The government also objects to Dr. Kasner's testimony that Ellison's admittedly major risk factors for stroke were not "particular contributors" to his stroke on September 11. (Def.'s Kasner Mem. 21). However, the government does not offer any basis to find unreliable Dr. Kasner's testimony on this point.

Finally, the government challenges Dr. Kasner's opinion that had Ellison "been more judiciously monitored for a brief time after his procedure to ensure that he was stable, his stroke symptoms would likely have been recognized much sooner and allowed an opportunity for timely intervention." (Kasner 11/18/08 report at 3.) The government first argues that in light of Dr. Kasner's testimony that a "brief time" meant only 30 minutes to an hour (Kasner Dep. 14), additional monitoring would not have made a difference because Ellison was counseled by a VA pharmacist more than an hour after his procedure and was not observed to be exhibiting signs of stroke. (*See* Def.'s Kasner Mem. 12, 21-22.) Plaintiff does not directly respond to this

argument, but how long Ellison should have been monitored is a standard of care question, and Dr. Super's opinion is that Ellison should have been monitored for several hours, in which case additional monitoring may have resulted in earlier detection of his stroke.

III. Motion for Summary Judgment

Because the court will deny the government's motion to exclude from trial the proposed testimony of Dr. Kasner, the court will also deny the government's motion for summary judgment, to the extent that the motion is based on the argument that without Dr. Kasner, plaintiff will be unable to meet her burden to prove causation. The government also argues that summary judgment is warranted, even if Dr. Kasner is permitted to testify, but this argument is no different from the government's argument that Dr. Kasner's testimony should be excluded, which the court has rejected for the reasons set forth above. The court will therefore deny the government's motion for summary judgment on this basis as well.

IV. Conclusion

As set forth above, the court will deny the defendant's motions to exclude the testimony of Dr. Super as to standard of care and of Dr. Kasner as to causation. Likewise, the court will deny the defendant's motions for summary judgment. An appropriate order follows.